

Binary Search

Objective:

Implement a method that performs a binary search on data in a list.

Program Description:

- **Return to the program you wrote for sequential search.**
- Implement a new static method called `binarySearch` that returns the position of the location of a search item in a list, or `-1` if the search item is NOT contained in the list, based on the binary search algorithm. (note to get it to actually work, you'll need to sort the array before searching).
- In your driver class, construct an ARRAY. Load it with values from the provided input file.
- Input has the format shown in the example below. The first number in the file indicates the subsequent number of names.
- Your driver should prompt the user for a search item (a name in this case) and then display either the position at which the item is found, or an indication that the item has not been found. Please label this output to provide meaning to the user...i.e. do not simply flash a `-1` on the screen and expect the user to understand the item is NOT in the list.
- Comment your code.
- Perform runs on the following input values by the user, screen capture the results, and paste as comments at the bottom of your code:
 - Michael
 - Rita
 - Megan
 - Bellatrix

```
4  
Stephanie  
Linh  
Chip  
Teddy
```